REMARKS

The Office Action dated October 15, 2008 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 17-20, 24, 25, 56 and 58-73 are presently pending in the application and are submitted for consideration.

Claims 17-20, 24, 25, 56 and 58-73 were rejected under 35 U.S.C. §103(a) as being unpatentable over IEEE Std. 802.16-2001 (IEEE) in view of Laasko (U.S. Patent No. 6,671,512). The Office Action took the position that IEEE Std. 802.16-2001 discloses all of the elements of the claims, with the exception of monitoring by a base station at least one of capacity request messages received, capacity grant messages sent and data transmission received from a subscriber station. The Office Action then cited Laasko as allegedly curing this deficiency in IEEE Std. 802.16-2001. This rejection is respectfully traversed for at least the following reasons.

Claim 17, upon which claims 68-69 depend, is generally directed to an apparatus that includes a granting means for granting a transmission capacity subscriber station-specifically, a transmitting means for transmitting capacity grant messages to at least one subscriber station, and a monitoring means for monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Claim 20, upon which claims 70-71 depend, is generally directed to an apparatus that includes a first transmitting means for transmitting capacity request messages of at

least one connection and a receiving means for receiving capacity grant messages from a base station. The apparatus also includes an allocating means for connection-specifically allocating a capacity granted by the base station, a second transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and a third transmitting means for transmitting data according to a capacity allocation made by the subscriber station.

Claim 24, upon which claims 18-19 and 72 depend, is generally directed to an apparatus that includes a receiver configured to receive capacity request messages from at least one subscriber station and a processor. The processor is configured to grant a transmission capacity subscriber station-specifically, transmit capacity grant messages to the at least one subscriber station, and monitor request messages received from the at least one subscriber stations, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber station.

Claim 56, upon which claims 58-60 depend, is generally directed to a method that includes transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The method also includes a transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 61, upon which claims 62-63 depend, is generally directed to a method that includes granting a transmission capacity subscriber station-specifically and transmitting capacity grant messages to at least one subscriber station. The method also includes monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Claim 64, upon which claim 65 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The operations also include transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 66, upon which claim 67 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, and granting a transmission capacity subscriber station-specifically. The operations also include transmitting capacity grant messages to at least one subscriber station, and monitoring capacity request messages

received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

As will be discussed below, the combination of IEEE Std. 802.16-2001 (IEEE) and Laasko fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

IEEE generally discloses a standard for an air interface of stationary broadband wireless access systems. The standard includes a medium access control layer that is capable of supporting physical layer specifications, and a particular physical layer specification that is applicable to systems that operate between 10 and 66 Gigahertz.

The Office Action admitted that IEEE is deficient with respect to each of the claim recitations recited in independent claims 17 and 61 (see page 2, last five lines of the Office Action). The Office Action then relied on the disclosure of Laasko as allegedly curing those deficiencies of claims 17 and 61. In particular, the Office Action alleged that Laakso discloses "monitoring by the base station of at least one of capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station, and data transmission received from the at least one subscriber stations", and relied on the Abstract and columns 2, 4 and 10 of Laasko for support. Applicants disagree and submit that Laasko does not cure the deficiencies of IEEE with respect to claims 17 and 61.

Laakso discloses a "fast" load (first control method) operation that provides controlling or reducing a load during an load overload situation (i.e., when the load reaches above a certain reference load value). The load is managed and controlled on a per base station sector basis by changing transmit power commands. Modifying the transmit power may be performed by changing the transmission power commands (TPC). The above "fast" load reduction is supplemented by a "slow" load (second control method) operation that operates by modifying transmission bit rates to correct the overload situation in a more permanent manner than the "fast" load operation. Also, the "slow" load operations may be used if the first load control method turned out to be insufficient, or, the current connections are being removed from the cell (see column 2, lines 18-32 of Laasko).

Laakso further discloses that traffic load is periodically monitored by monitoring a load indication parameter. The load indication parameter is related to the power. For instance, in the uplink direction, total interference power serves as the load indication parameter. Conversely, in the downlink direction, total transmission power serves as the load indication parameter (see column 4, lines 19-31 of Laasko). Laakso discloses a list of actions which are performed "in order to reduce load" (see column 10, lines 15-32 and Abstract of Laasko). These actions include, for instance, manipulating TPC commands, lowering Eb/No target ratios etc. (Eb typically being the energy of a bit − No being the power noise spectral density, and, Eb/N0 being the signal-to-noise ratio). The actions also include lowering bit rates and dropping calls.

In other words, Laakso discloses a load control method to reduce the network load in circumstances that warrant such action. Laasko does not disclose or suggest a method for granting capacity, which may also be considered increasing the load. As noted above, reducing the load is performed by cutting back on network resources. Transmission capacity granting and monitoring capacity requests are not achieved by the resource limiting features of Laasko. In addition, if capacity is not granted and capacity requests are not monitored, then, certainly, Laasko cannot possibly grant capacity, transmit a granted capacity message or monitor capacity granted messages, which are also features recited in independent claim 17 and similarly in independent claim 61. Laasko simply fails to disclose granting and monitoring network resources in the manner prescribed in claims 17 and 61. At best, Laakso simply monitors traffic load and provides a method to reduce the traffic load.

In addition to the above-noted deficiencies of Laasko and IEEE with respect to claims 17 and 61, Applicants submit that Laasko and IEEE would not be obvious to combine. IEEE discloses a particular type of air interface used by fixed point-to-point broadband wireless access systems. The standard includes a particular physical layer specification (e.g., capacity requests, capacity grants, polling etc.). Contrary to the IEEE disclosure, Laasko discloses a method for traffic load control by manipulating power control commands not related to capacity grants. In particular, the traffic load control performed by Laasko does not take into account capacity requests, grants or polling. Therefore, a person having ordinary skill in the art would not have any motivation to

combine these two references. Capacity load granting and power control are by their very nature not comparable features. Thus, independent claims 17 and 61 and those claims dependent thereon are not obvious over IEEE and Laasko.

Regarding claims 20 and 64, the Office Action alleged that Laakso discloses "allocating means for allocating connection-specific a capacity granted by a base station" and relied on the Abstract and columns 2, 4 and 10 of Laasko for support. Applicants respectfully disagree that Laasko discloses this feature of claims 20 and 64.

As described in detail above, Laakso discloses that traffic load is periodically monitored by monitoring a load indication parameter that is related to the power (see column 4, lines 19-31 of Laasko). Laakso also lists certain actions for reducing the load control method in column 10, lines 15-32 and in the Abstract. Laakso is silent regarding "allocating connection-specific capacity granted by a base station" because Laasko does not provide any adding of resources, such as, granting access to network bandwidth capacity. Laakso is also silent about handling requests or requesting capacity in general. Thus, independent claims 20 and 64 and those claims dependent thereon are allowable over IEEE and Laasko.

Regarding claims 24 and 66, the Office Action alleged that Laakso discloses "monitoring request messages received from the at least one subscriber stations" and relied on the Abstract and columns 2, 4 and 10 of Laasko for support. Applicants respectfully disagree that Laasko discloses these features of claims 24 and 66.

As noted above, Laasko does not disclose or suggest a method for granting capacity or monitoring request messages received. Reducing the load is performed by cutting back on network resources. Transmission capacity granting and monitoring capacity requests are not achieved by the resource limiting features of Laasko. In addition, if capacity is not granted and capacity requests are not monitored, then, certainly, Laasko cannot possibly transmit a granted capacity message or monitor capacity grant messages, which are also explicit features recited in independent claim 24 and similarly in independent claim 46. Laasko simply fails to disclose granting and monitoring network resources in the manner prescribed in claims 24 and 46. At best, Laakso simply monitors traffic load and provides a method to reduce the traffic load.
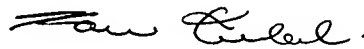
In light of the above, Applicant respectfully asserts that a combination of IEEE and Laasko fail to disclose or suggest all the limitations of independent claims 17, 20, 24-25, 56, 61, 64, and 66. Therefore, Applicant respectfully requests that the §103(a) rejection of independent claims 17, 20, 24-25, and 56 and related dependent claims be withdrawn.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 17-20, 24, 25, 56 and 58-73 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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